

## REMARKS

### Office Action Mailed September 20, 2004

In the office action mailed September 20, 2004, the examiner states that the reply filed on 8/10/04 is not fully responsive to the prior Office Action because "Applicants have not addressed each and every issue set forth in the previous office action, nor have they argued any issues in the latest submission of a reply." The examiner indicates that the application will become abandoned unless applicant corrects the deficiency and obtains an extension of time.

Applicant respectfully submits that substantive argument addressing rejections under 35 U.S.C. § 102 and/or 103 were submitted on April 7, 2004. Although the claims have been amended in response to various rejections as to form, the previously submitted substantive arguments apply equally to the new claims. Nevertheless, Applicant's substantive arguments have not been considered by the examiner. In the previous response, Applicant respectfully requested entry and consideration of new claims 105-141, along with the arguments presented in the amendment of April 7, 2004 (response to second office action, p. 11).

Applicant submits that new claims 105-141 remedy any claim deficiency objections or rejections that have been made by the examiner. In an effort to comply with the office action mailed September 20, 2004, Applicant once again presents the substantive arguments that were originally presented on April 7, 2004. The arguments have been edited to the extent required to refer to new claims 105-141 and to take into account events occurring since April 7, 2004.

Applicant submits that no petition for extension of time should be required in order for the examiner to consider the arguments presented approximately 5 months ago. To the extent that the examiner disagrees, Applicant hereby requests an extension of time.

**Restriction Requirement**

Applicant acknowledges that the examiner has made the restriction requirement final.

**Information Disclosure Statement**

Applicant acknowledges that Information Disclosure Statements have been considered.

**Rejections Under 35 U.S.C. § 102**

**-Rejection over Seiberle**

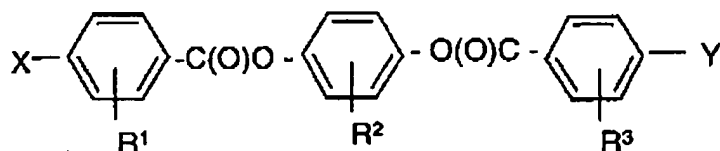
The examiner rejected claims 1-34 and 55-63 as anticipated under 35 U.S.C. § 102(e) by Seiberle.

**-Response**

Claims 1-34 and 55-63 have been canceled. The rejection is moot with respect to claims 55-63. Applicant does not concede that Seiberle is correctly cited against the claims under 35 U.S.C. § 102(e). The following assumes, for purposes of argument only, that Seiberle is correctly cited.

Pending claims 105-141 are directed to a method--not to a composition. The examiner's arguments focus on the polymers used and/or produced in the cited references and not on the methods described in the references.

The claimed **method** requires “providing one or more platform molecules having the following general structure:



and “independently substituting at least one member selected from the group consisting of X and Y with a polymerizable group, thereby producing a blend of randomly substituted mesogens.” See claim 105.

The examiner has not established a case of *prima facie* anticipation of the pending **method** claims over Seiberle. In order to establish a case of *prima facie* anticipation, the examiner must establish that Seiberle discloses every limitation of the claimed method either explicitly or inherently. *Atlas Powder Co. v. Ireco Inc.*, 190 F.3d 1342, 1346, 51 USPQ2d 1943, 1945 (Fed. Cir. 1999). The examiner has not met this burden.

At least Example 1 of Seiberle appears to teach one to produce mesogens by:

- (a) providing 2,5- dihydroxybenzoic acid (col. 24, ll. 20-bottom);
- (b) reacting the halogen of a bulky organic group (such as the “2-methylacrylic acid 11-bromoundecyl ester” shown at col. 23, ll. 40) with the carboxyl group of the 2,5- dihydroxybenzoic acid (col. 24, ll. 20-bottom), producing a 2,5-dihydroxybenzoic (substituted) acid (see col. 24, l. 20); and

- (c) reacting the 2,5-dihydroxybenzoic (substituted) acid with aromatic groups already comprising polymerizable end groups, such as the "4-carboxyl cinnamic acid methyl ester" at col. 23, l. 25.

The examiner has not pointed to a teaching or suggestion of a method in which the claimed "platform molecule(s)" comprising three aromatic rings or more are provided and then "at least one member selected from the group consisting of X and Y [is independently substituted] with a polymerizable group, thereby producing a blend of randomly substituted mesogens." The examiner therefore has not established a case of *prima facie* anticipation over Seiberle.

The examiner also has not established that the claims are *prima facie* obvious over Seiberle. In order to establish a case of *prima facie* obviousness, the examiner must point to two things in Seiberle or in another cited reference and not in the applicant's disclosure: (1) the suggestion of the claimed method, and (2) the expectation of its success. *In re Vaeck*, 20 U.S.P.Q.2d 1438, 1442 (Fed. Cir. 1991). *See also* MPEP 2143. The examiner has not pointed to (1) or (2) in Seiberle. Nor has the examiner pointed to a teaching or suggestion in the cited references that it would be desirable to make the modifications that would be required to result in the claimed method. *In re Brouwer*, 37 U.S.P.Q.2d 1663, 1666 (Fed. Cir. 1995).

Applicant respectfully requests that the rejection based on Seiberle be withdrawn.

**-Rejection over Schadt**

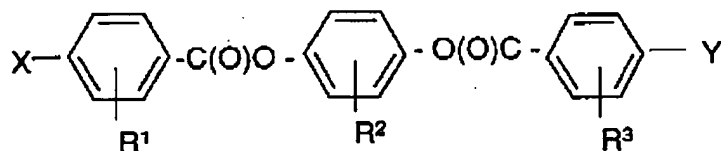
The examiner rejected claims 1, 5, 8, 11, 14, 31, 33, and 55-62 anticipated by U.S. Patent No. 6,144,428 to Schadt ("Schadt").

**-Response**

The rejected claims have been canceled and new claims 105-141 have been added. The examiner has not established a case of *prima facie* anticipation of claims 105-141 over Schadt.

The rejection again focuses on the structure of the liquid crystal molecules made by Schadt, and not on the method by which Schadt makes the liquid crystal molecules. With respect to how the molecules are made, Schadt teaches that "[s]ubstances having these properties in principle, that is certain cross-linkable liquid crystalline diacrylates and diepoxides, have been known for some years." Col. 1, ll. 21-23. Applicant has not found teachings in Schadt regarding how to make the monomers described at the bottom of cols. 3-4. Schadt apparently assumes that the monomers are made using known methods.

In any event, the examiner has not pointed to a teaching or suggestion in Schadt of a method comprising providing "one or more platform molecules having the following general structure:



and "independently substituting at least one member selected from the group consisting of X and Y with a polymerizable group, thereby producing a blend of randomly substituted mesogens." Claim 105.

The examiner also has not established that the claims are *prima facie* obvious over Schadt. The examiner has not pointed to a teaching in Schadt or in another cited reference of: (1) the suggestion of the claimed method, or (2) the expectation of its success. *In re Vaeck*, 20 U.S.P.Q.2d at 1442. Nor has the examiner pointed to a teaching or suggestion in Schadt or another cited reference that it would be desirable to make the modifications that would be required to result in the claimed method. *In re Brouwer*, 37 U.S.P.Q.2d 1663, 1666 (Fed. Cir. 1995).

Applicant respectfully requests that the rejection over Schadt be withdrawn.

#### **-Rejection over Joliffe**

The examiner rejected claims 1-34 and 55-63 as anticipated by U.S. Patent No. 6,117,920 to Jolliffe, et al. ("Jolliffe").

#### **Response**

Claims 1-34 and 55-63 have been canceled and new claims 105-141 have been added. The examiner has not established a case of *prima facie* anticipation over Jolliffe. Joliffe describes many different polymers. However, the only description of a **method** for making these polymers that Applicant has found in Joliffe is the following:

The compounds (1) and (2) are prepared in analogy to the methods described in WO 93122397 and DE 195 04 224.

See col. 23, ll. 43-44 and col. 25, l. 16-17. WO 93122397 and DE 195 04 224 appear to correspond to U.S. Patent No. 5,871,665 to Coates, et al. ("Coates"), which was

previously submitted in an Information Disclosure Statement. The examiner has not pointed to the limitations of the claimed method in either Jolliffe (or in Coates). In particular, the examiner has not pointed to a starting mesogen having the claimed structure comprising three aromatic rings joined by ester linkages. Where Jolliffe does describe more than one aromatic ester linkage in the method diagrams beginning at col. 45, a mesogen comprising one polymerizable end and one hydroxyl end is reacted with another aromatic moiety comprising a polymerizable end. See Diagram 9, col. 61-62. See also Diagram 10, col. 61 and 62-col. 63 and 64.

The examiner has not established a case of *prima facie* anticipation of method claims 105-141 over Jolliffe.

The examiner also has not established that claims 105-141 are *prima facie* obvious over Jolliffe. The examiner has not pointed to a teaching in Jolliffe or in another cited reference of: (1) the suggestion of the claimed method, or (2) the expectation of its success. *In re Vaeck*, 20 U.S.P.Q.2d at 1442. Nor has the examiner pointed to a teaching or suggestion in Jolliffe or another cited reference that it would be desirable to make the modifications that would be required to result in the claimed method. *In re Brouwer*, 37 U.S.P.Q.2d 1663, 1666 (Fed. Cir. 1995).

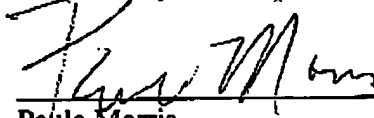
Applicant respectfully requests that the rejection over Schadt be withdrawn.

#### CONCLUSION

Applicant respectfully requests consideration and allowance of all of the pending claims. The Commissioner is hereby authorized to charge any fees in connection with

this response, or to credit any overpayment, to Deposit Account No. 50-0997 (SwRI-2835-03) maintained by Paula D. Morris & Associates, P.C.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "Paula Morris", is written over a horizontal line.

Paula Morris

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